

Amendments to the Claims

1. (previously presented) A method of prioritizing content, said method comprising:
 - receiving at a proxy cache a request for a first content object;
 - searching a data structure of said proxy cache for a portion of said first content object;
 - calculating the size of said portion of said first content object on said proxy cache;
 - deriving the normally utilized size of said first content object requested, wherein said normally utilized size is based on the average of the times said first content object was requested; and
 - comparing the size of said portion of said first content object on said proxy cache with the normally utilized size of said first content object requested, wherein said first content object is prioritized based on said comparison.
2. (original) The method of Claim 1 comprising:
 - receiving said request for said first content object from a client device.
3. (original) The method of Claim 1 wherein the calculating the size of said portion of said first content object on said proxy cache comprises:
 - counting a total number of segments of said portion of said first content object cached on said proxy cache;
 - measuring a length of said total number of segments of said portion of said first content object; and
 - multiplying said total number of segments with said length of said segments of said first content object.
4. (original) The method of Claim 1 wherein the deriving the normally utilized size of said first content object requested comprises:
 - utilizing said access log of said proxy cache to establish an average view length of said first content object.
5. (original) The method of Claim 1 wherein said method comprises:

admitting no further portion of said first content object to said proxy cache if said normally utilized size is less than the size of said portion of said first content object on said proxy cache.

6. (original) The method of Claim 1 wherein said method comprises:
admitting a further segment of said first content object to said proxy cache if said normally utilized size is greater than the size of said portion of said first content object on said proxy cache.

7. (original) The method of Claim 6 comprising:
checking available cache space on said proxy cache for room to admit said further segment of said first content object; and
making room on said proxy cache for said further segment of said first content object.

8. (original) The method of Claim 7 wherein said making room on said proxy cache comprises:
calculating a utility value for other content objects on said proxy cache;
prioritizing said other content objects based on said utility value;
selecting one of said other content objects with a smallest utility value;
removing a lowest priority portion of said other content object with the smallest utility value on said proxy cache; and
admitting said further segment of said first content object to said proxy cache.

9. (original) The method of Claim 8 wherein if said one of said other content objects with the smallest utility value is fully cached further comprises:
segmenting said one of said other content objects with the smallest utility value based on a previous duration of access to said one of said other content objects with the smallest utility value.

10. (original) The method of Claim 8 wherein if said one of said other content objects with the smallest utility value is not fully cached further comprises:
removing all segments of said one of said other content objects with the smallest utility value.

11. (previously presented) A caching proxy comprising:
a communication link to a content source and a communication link to a client device;
a memory unit coupled to said communication links; and
a processor coupled to said memory unit, said processor for executing a method of prioritizing content, said method comprising:
receiving at a proxy cache a request for a first content object;
searching an access log of said proxy cache for said first content object;
checking available cache space on said proxy cache for space to admit said first content object; and
admitting all of said first content object to said proxy cache; and
prioritizing said first content object and other content objects respectively based on a utility value.

12. (previously presented) The caching proxy of Claim 11 wherein said method comprises:
calculating a utility value for other content objects on said proxy cache;
selecting a second content object with a smallest utility value; and
removing a lowest priority portion of said second content object from said proxy cache.

13. (original) The caching proxy of Claim 12 wherein if said second content object is not segmented, said method comprising:
utilizing said access log of said proxy cache to establish an average view length of said second content object; and
dividing said second content object into segments collaborate with said average view length.

14. (original) The caching proxy of Claim 12 comprising:
removing all segments of said second content object with the smallest utility value if said second content object with the smallest utility value is not fully cached.

15. (original) The caching proxy of Claim 11 wherein said method comprises:
receiving said request for said first content object from an end user.

16. (original) A computer-usable medium having computer-readable program code embodied therein for causing a caching proxy to perform a method of prioritizing content, said method comprising:

receiving at a proxy cache a request for a first content object;
searching an access log of said proxy cache for said first content object;
finding at least one segment of said first content object on said proxy cache;
calculating the size of said first content object on said proxy cache;
calculating the average view length of the segment of said first content object requested;
comparing the size of said first content object on said proxy cache and the average view length of said first content object requested;
denying a further segment of said first content object to said proxy cache if said average view length is less than the size of said first content object on said proxy cache; and
admitting a further segment of said first content object to said proxy cache if said average view length is greater than the size of said first content object on said proxy cache.

17. (original) The computer-usable medium of Claim 16 wherein said computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

receiving said request for said first content object from an end user.

18. (original) The computer-usable medium of Claim 16 wherein said computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

finding a total number of said at least one segment of said first content object cached on said proxy cache;
measuring a length of said at least one segment of said first content object; and

multiplying said total number of cached segments with said length of said at least one segment of said first content object.

19. (original) The computer-usable medium of Claim 16 wherein said computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

utilizing said access log of said proxy cache to establish an average view length of said first content object.

20. (original) The computer-usable medium of Claim 16 wherein said computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

checking available cache space on said proxy cache for room to admit said further segment of said first content object;

calculating the utility value for other content objects on said proxy cache;

prioritizing said other content objects based on said utility value;

selecting one of said other content objects with the smallest utility value;

removing portions of lowest priority of said other content objects with the smallest utility value on said proxy cache; and

admitting said further segment of said first content object to said proxy cache.

21. (original) The computer-usable medium of Claim 20 wherein said computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

segmenting said one of said other content objects with the smallest utility value based on a previous duration of access to said one of said other content objects with the smallest utility value if said one of said other content objects with the smallest utility value is fully cached; and

removing all segments of said one of said other content objects with the smallest utility value if said one of said other content objects with the smallest utility value is not fully cached.

REMARKS

Claims 1-21 remain pending in the present application. No new matter has been added.

Rejection under 103(a)

Claims 1-2, 4-7, 11, 13, 15-17 and 19

In the Office Action, the Examiner rejected Claims 1-2, 4-7, 11, 13, 15-17 and 19 under 35 USC 103(a) as being unpatentable over Krissell (20050060493) in view of Dixit (7051161). Applicants have reviewed the cited reference and respectfully submit that the present invention is not rendered obvious over Krissell in view of Dixit for the following rationale.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). (MPEP 2143.03).

Claims 1, 11 and 16

Applicants respectfully agree with the Examiner that Krissell does not disclose the elements “comparing the size of said portion of said first content object on said proxy cache with the normally utilized size of said first content object requested, and denying a further segment of said first content object to said proxy cache if said average view length is less than the size of said first content object on said proxy cache; and admitting a further segment of said first content object to said proxy cache if said average view length is greater than the size of said first content object on said proxy cache.”

However, Applicants respectfully submit that Dixit does not overcome the shortcomings of Krissell. That is, the Examiner has not shown and Dixit does not teach or render obvious the features “comparing the size of said portion of said

first content object on said proxy cache with the normally utilized size of said first content object requested, and denying a further segment of said first content object to said proxy cache if said average view length is less than the size of said first content object on said proxy cache; and admitting a further segment of said first content object to said proxy cache if said average view length is greater than the size of said first content object on said proxy cache.”

For this reason, Applicants respectfully submit that Claims 1, 11 and 16 are not taught or rendered obvious over Krissell in view of Dixit. As such, Applicants respectfully submit that Claims 1, 11 and 16 overcome the rejection under 35 U.S.C. §103(a).

In addition, assuming arguendo that Dixit does disclose, as the Examiner has stated “in figures 3-10, the average size of object currently store in the cache (Abstract, col. 3, lines 6-22; col. 4, lines 66 +; col. 5, lines 59-62; col. 6, lines 3-21, lines 45 +; col. 7, lines 20 +)”. Neither Dixit nor Krissell teach or render obvious the features the Examiner has relied upon, that is, “to find out the average of the object currently in stored in the cache, to compared and make decision to denying or admitting will be cache”.

Moreover, Applicants respectfully submit that the Examiner has provided inadequate support for his statement on page 3 as to how the teachings of Dixit (e.g., the average size of object currently store in the cache) provide any type of teaching or obviousness regarding “to find out the average of the object currently in stored in the cache, to compared and make decision to denying or admitting will be cache”.

That is, Applicants do not understand how the Examiner’s teachings render obvious the features “comparing the size of said portion of said first content object on said proxy cache with the normally utilized size of said first content object requested, and denying a further segment of said first content

object to said proxy cache if said average view length is less than the size of said first content object on said proxy cache; and admitting a further segment of said first content object to said proxy cache if said average view length is greater than the size of said first content object on said proxy cache.”

For this additional reason, Applicants respectfully submit that Claims 1, 11 and 16 are not taught or rendered obvious over Krissell in view of Dixit. As such, Applicants respectfully submit that Claims 1, 11 and 16 overcome the rejection under 35 U.S.C. §103(a).

With respect to Claims 2 and 4-7, Applicants respectfully state that Claims 2 and 4-7 depend from the allowable Independent Claim 1 and recite further features of the present claimed invention.

With respect to Claims 13 and 15, Applicants respectfully state that Claims 13 and 15 depend from the allowable Independent Claim 11 and recites further features of the present claimed invention.

With respect to Claims 17 and 19, Applicants respectfully state that Claims 17 and 19 depend from the allowable Independent Claim 16 and recites further features of the present claimed invention.

Therefore, Applicants respectfully state that Claims 2, 4-7, 13, 15, 17 and 19 overcome the rejection under 35 U.S.C. §103(a) as being unpatentable over Krissell in view of Dixit. As such, Applicants respectfully submit that Claims 3, 7-9, 12, 14, 18 and 20-21 are allowable as pending from allowable base Claims and reciting additional features.

Claims 3, 7-10, 12, 14, 18 and 20-21

In the Office Action, the Examiner rejected Claims 3, 7-10, 12, 14, 18 and 20-21 under 35 USC 103(a) as being unpatentable over Krissell in view of Wolf.

Applicants have reviewed the cited reference and respectfully submit that the present invention is not rendered obvious over Krissell in view of Wolf for the following rationale.

“[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed amendment” (emphasis added) (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Applicants understand Wolf to teach a system for caching the beginning segments of media streams. In particular, Applicants respectfully assert that Wolf does not teach, describe, or suggest prioritizing content objects based on utility as claimed. In fact, Applicants respectfully assert that Wolf teaches directly away from caching only based on utility because Applicants understand Wolf to teach caching the beginning segments (emphasis added). For this reason, Applicants respectfully assert that Wolf in combination with Krissell as suggested by the present Office Action would render the prior art invention being modified unsatisfactory for its intended purpose (emphasis added).

For this reason, Applicants respectfully state that Claims 3, 7-10, 12, 14, 18 and 20-21 overcome the rejection under 35 U.S.C. §103(a) as being unpatentable over Krissell in view of wolf. As such, Applicants respectfully submit that Claims 3, 7-10, 12, 14, 18 and 20-21 are allowable as pending from allowable base Claims and reciting additional features.

Moreover, with respect to Claims 3 and 7-10, Applicants respectfully state that Claims 3 and 7-10 depend from the allowable Independent Claim 1 and recite further features of the present claimed invention.

With respect to Claims 12 and 14, Applicants respectfully state that Claims 12 and 14 depend from the allowable Independent Claim 11 and recite further features of the present claimed invention.

With respect to Claims 18 and 20-21, Applicants respectfully state that Claims 18 and 20-21 depend from the allowable Independent Claim 16 and recite further features of the present claimed invention.

Therefore, Applicants respectfully state that Claims 3, 7-10, 12, 14, 18 and 20-21 overcome the rejection under 35 U.S.C. §103(a) as being unpatentable over Krissell in view of wolf. As such, Applicants respectfully submit that Claims 3, 7-10, 12, 14, 18 and 20-21 are allowable as pending from allowable base Claims and reciting additional features.